Generell informasjon

Brønnbane navn	16/7-8 S
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Brønn navn	16/7-8
Seismisk lokalisering	Es9401 R99- inline 1039 & crossline6364
Utvinningstillatelse	072 B
Boreoperatør	Esso Exploration and Production Norway A/S
Boretillatelse	1043-L
Boreinnretning	DEEPSEA BERGEN
Boredager	33
Borestart	17.12.2002
Boreslutt	19.01.2003
Frigitt dato	19.01.2005
Publiseringsdato	11.02.2005
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	DRY
Funnbrønnbane	NO
Avstand, boredekk - midlere havflate [m]	23.0
Vanndybde ved midlere havflate [m]	79.5
Totalt målt dybde (MD) [m RKB]	2900.0
Totalt vertikalt dybde (TVD) [m RKB]	2645.3
Maks inklinasjon [°]	37.8
Temperatur ved bunn av brønnbanen [°C]	104
Eldste penetrerte alder	TRIASSIC
Eldste penetrerte formasjon	SKAGERRAK FM
Geodetisk datum	ED50
NS grader	58° 20' 22.06'' N
ØV grader	2° 0' 35.15'' E
NS UTM [m]	6467078.59
ØV UTM [m]	442021.30
UTM sone	31
NPDID for brønnbanen	4612

Brønnhistorie

General

Wildcat well 16/7-8 S was drilled in a water depth of 79.5 m in PL072B to test the hydrocarbon potential of the Beta West prospect 3km north of the Sigyn field, 3km east of the Sleipner East Field.

The Beta West prospect is located in the Ling Graben, south of the Utsira High, on the eastern margin of the South Viking Graben. The primary reservoir and the main target of the well were continental, fluvial sandstones (red beds) of the Skagerrak Formation with thin Upper Jurassic shallow marine sandstone, overlaying the Skagerrak Formation. The Beta West structure is defined by a 4-way dip closure.

Operations and results

The well was spudded with the semi-submersible installation "Deepsea Bergen" on 17 December 2002 and drilled deviated to a total depth of 2900 m MD (2645.5 mTVD) in the Triassic Skagerrak Formation. The well was drilled as a deviated well due to shallow gas concerns on the vertical well location. The well was drilled using sea water/high viscosity sweeps down to 445 m, with Glydril (KCl/Glycol WBM) from 445 m to 1319 m and Versavert OBM from 1319 m to TD. Shallow gas was expected at 234 m TVD and at 634 m TVD. Sandstones were observed in both intervals but proved to be water wet. The top of the reservoir was penetrated at 2585 m TVD, 25 m deeper than prognosed. The reservoir consists of approx. 21 m (vertical thickness) with Jurassic sandstone above the Skagerrak Formation. The base of the Skagerrak Formation was not penetrated in this well. The reservoirs proved to be water bearing without any indications of hydrocarbons.

No wireline logs were run in this well. MWD logs were run as follows: gamma ray and resistivity in all sections from the 30" casing shoe to TD. Pressure while drilling was recorded in the 9 7/8" pilot hole and in the 8 1/2" section. Neutron and density were logged in the 8 1/2" hole. One oriented core was cut in the interval 2827 - 2874.5 m MD, but only 2.9 m out of 47.5 m were recovered. The recovered interval (2827 - 2829.9 m MD) represents the Hugin Formation. The low core recovery (6.1%) was due to jamming of the bit when the drillstring was rotated without circulation with the bit at bottom. This is not according to procedures and should be avoided. Acquisition of the orientation data proved to be trouble-free. No fluid sample was collected. No formation pressure data was measured in this well. The pore pressure evaluation is based on MWD log data and drilling parameters. A normal pore pressure gradient is estimated down to approximately 1400 m TVD RKB where an increase starts and continues through the Hordaland Group. The highest pore pressure is assumed at 2000 m TVD RKB, in the Balder Formation, with a gradient of 1.20 g/cm3. A decrease of the gradient is calculated through the Sele and Lista formations. A low gradient is assumed through the Ekofisk Formation, and a slight increase is assumed in the Cromer Knoll shale sequence. At the top of the Upper Jurassic/Skagerrak sandstone a pore pressure gradient of 1.16 g/cm3 is estimated in the water filled reservoir. At TD a pore pressure of 1.14 g/cm3 is assumed. No pressure points were conducted so the pore pressure in the reservoir is based on prognosis.

The well was permanently plugged and abandoned on 19 January 2003 as a dry well.

Testing

No drill stem test was performed.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
460.00	2900.00

Borekaks tilgjengelig for prøvetaking?	YES

Borekjerner i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2827.0	2829.9	[m]

Total kjerneprøve lengde [m]	2.9
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder

2827-2829m

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
103	NORDLAND GP
851	UTSIRA FM
1046	HORDALAND GP
1170	SKADE FM
1182	NO FORMAL NAME
2224	ROGALAND GP
2224	BALDER FM
2298	SELE FM
2360	LISTA FM
2458	VÅLE FM

2474	SHETLAND GP
2474	EKOFISK FM
2484	TOR FM
2687	HOD FM
2765	BLODØKS FM
2778	SVARTE FM
2787	CROMER KNOLL GP
2787	RØDBY FM
2809	SOLA FM
2813	ÅSGARD FM
2818	VIKING GP
2818	DRAUPNE FM
2821	HEATHER FM
2825	VESTLAND GP
2825	HUGIN FM
2856	NO GROUP DEFINED
2856	SKAGERRAK FM

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
4612	pdf	0.51

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
4612_16_7_8_S_COMPLETION_LOG	.pdf	6.39
4612_16_7_8_S_COMPLETION_REPORT	.pdf	4.12

Foringsrør og formasjonsstyrketester

Type utforing	Utforing diam. [tommer]	Utforing dybde [m]	Brønnbane diam. [tommer]	Brønnbane dyp [m]	LOT/FIT slam eqv. [g/cm3]	Type formasjonstest
SURF.COND.	30	149.0	36	150.0	0.00	LOT
INTERM.	13 3/8	442.0	17 1/2	444.0	1.51	LOT
INTERM.	9 7/8	1316.0	12 1/4	1317.0	1.58	LOT
OPEN HOLE		2900.0	8 1/2	2900.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
805	1.13	12.0		GLYDRIL 10	
1319	1.18	12.0		GLYDRIL 10	
1492	1.42	38.0		VERSAVERT 41	
2143	1.45	34.0		VERSAVERT 41	
2605	1.45	31.0		VERSAVERT 41	
2801	1.45	36.0		VERSAVERT 41	
2827	1.45	36.0		VERSAVERT 41	
2875	1.45	33.0		VERSAVERT 41	
2900	1.45	34.0		VERSAVERT 41	